A renaissance for social mobility and its significance for the bridge towards postsecondary education

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"Optimizing Talent: Closing Education and Social Mobility Gaps Worldwide"

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Abstract
Inequality in earned wages is in our western society on the increase. Social mobility is on the decrease. The contribution of education to equality of opportunity is decreasing, because education adapts more slowly to the increasing complexities of our societies than the home and social environment of the upper class and the upper part of the middle class. These are the forewarnings of a meltdown of the nuclear fusion reactor providing the energy of our societies: trust between social groups and hope of social betterment now and in the future for the next generation.

Can meltdown be prevented by education, by a renaissance of social mobility and what social engineering would be needed to bring this about? This is the main question we address here, focused on K-12 (as well as Early Childhood Development), against a substantiation of the above background. We address this question in the context of the transition from high school to postsecondary education.

This paper is written for a seminar-session on the transition of youngsters through the education system, from ECD through K-12 from the perspective of the potential future participation in higher education and from the prospects of children for a future, solid position in society, which always starts with the position on the labour market.

JEL codes: I23, I24, I25, I28, J62, O15

Keywords: postsecondary education, higher education, income inequality, income distribution, job mobility, social mobility, economic development, education policy

King Peter (to his servants):

“Tell me, what is the knot in my hanky supposed to mean?”

“Ah, yes, it should remind me of the people”.

Georg Büchner, Leonce and Lena

(in German, Universal-Bibliothek, Stuttgart)

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1. A meltdown?

Inequality in earned wages is in our western society on the increase. Social mobility is on the decrease. The contribution of education to equality of opportunity is decreasing, because education adapts more slowly to the increasing complexities of our societies than the home and social environment of the upper class and the upper part of the middle class. These are the forewarnings of a meltdown of the nuclear fusion reactor providing the energy of our societies: trust between social groups and hope of social betterment now and in the future for the next generation. This is not Friedman's (2005) quite accurate prediction of the present economic crises, but rather a forewarning for a social crisis.

Can meltdown be prevented by education, by a renaissance of social mobility and what social engineering would be needed to bring this about? This is the main question we address here, focused on K-12 (as well as Early Childhood Development), against a substantiation of the above background. We address this question in the context of the transition from high school to postsecondary education.

This seminar focuses on the optimization of talents worldwide, through the closure of the education and social mobility gaps. It is a stark wake-up call to notice that at present the dynamics seem to be (we cannot say: are, because the evidence is as yet weak) in the opposite direction in parts of the world (the economically developed countries). Income inequality within countries is on the rise, due to the combination of the embracement of free markets and what some call increasing technological progress and others call the increasing complexity of our societies (Elkana, 2011), increasing the relative scarcity value of the well educated.

This paper is written for a seminar-session on the transition of youngsters through the education system, from ECD through K-12 from the perspective of the potential future participation in higher education and from the prospects of children for a future, solid position in society, which always starts with the position on the labour market.

The seminar covers the world as a whole, recognizing the major differences between the economically well-developed countries, the emerging economies and the economically weak countries. These differences also exist in the trends of social mobility and the personal and social investment value of education. Yet as a whole, the globalization of our world is also found back in the similarity of trends in countries, with more income inequality (within countries), the imminence of less social mobility towards quality education which is rewarded on the labour market and as a result the threat of less social cohesion which in turn may undercut economic performance (Easterly, Ritzen and Woolcock, 2006).

This paper is organized as follows:

- In section 2 we discuss the role of education for the development of the individual along different dimensions (cognitive, attitudinal). Our education systems allow us to grow beyond the constraints of our parental background, to harvest the talents in society which would have –without our systems of public education- not matured, not been expressed or not been recognized. Social mobility is the chance of moving away from the determinism of your parental background towards a better life as well as –at the same time- an increased contribution to society. We notice –based on research from well-developed countries- that we may have reached a point where social mobility is decreasing or at least stagnant by showing that the impact of the parental background on learning outcomes (which has been decreasing in the middle part of the precious century) appears to be on the increase.
- In section 3 our focus is on education as a societal and individual investment which allows for participation of the graduates in a highly complex society. To be sure, it is the quality of education which counts, not just the numbers. The system of production (the provision of goods and services in a country) is increasingly characterized by the

presence of well-qualified labour, with less and less room to substitute physical capital or labour with low qualifications for well-trained labour. This has made well-trained labour increasingly scarce, despite the increase in supply (due to the expansion of (higher) education). As a result the wages of the well-trained continued to go up, also relative to those with fewer qualifications. This is the main explanation for the increase in income inequality in most of our nations (where fortunately the income inequality **between** countries has been decreasing since 1995-2000, due to the convergence between rich and poor countries – poor countries growing faster than rich countries). There is some evidence that in the process of disequalization of incomes the impact of parental background on the labour market position (even when cognitive achievement was the same) increased, so that social mobility decreased.

- In section 4 we look at the education system which has first (in Europe and the US for the generations born between 1945 and 1980-1985) been such a strong force for social mobility (and social cohesion as a result, we argue) but seems to be letting us down. And not just in social mobility, also in its contribution to (sustainable) economic growth. There are many differences between education systems. Yet we see the following elements in education systems which make them inadequate for "optimizing talents", for a bright future of hope and prosperity:
    - Segregation within the system where poorer students receive poorer education.
    - Teachers being behind the curve in understanding complexity and therefore unable to communicate this to children who do not receive this understanding at home.
- What does this mean for the transition to secondary education (section 5)? In many countries we have too much relied on secondary school achievements or their equivalent in terms of standardized tests for admission to university. There is ample reason to believe that –in view of the dependency of these achievements on parental background- this means that talents will be lost. Now that we seem to see that parental background is becoming again more important while at the same time we can less and less afford to lose talent in a knowledge society new policy lines need to be established for the transition towards postsecondary education. Traditionally the focus on the social mobility side of this transition has been on the "capital market" deficiencies in borrowing for the costs of

participation to higher education: children from poorer backgrounds would be unable to pay for higher education. However, there is very little evidence to this effect in countries where tuition fees for higher education are not "outrageous" (see section 5 for a description) and where a social loan system exists.
- The last section (6) presents the policy options to escape from a possible meltdown in social cohesion. Will we see them in (election) programs of political parties?

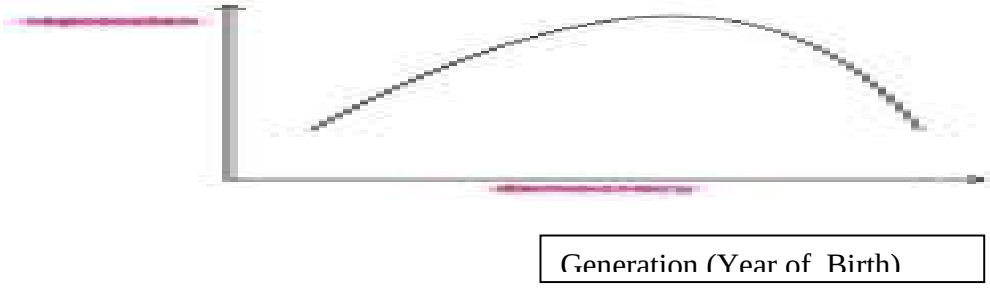
2. Education makes a difference

The evidence on the impact of education from ECD onwards up to and including higher education on cognitive achievements and on attitudes is well documented. The first documentation is from Dupin (1828) which is solely on quantity: a map of France showing by region the number of children in school in relation to the population. This document simply assumes that the regions with higher participation are more advanced than others in terms of student learning. I mention this as an example for many developing countries, where great regional differences in participation to K-12 exist without any other explanation than the political will to draw children into school. Of course, it is even better to combine this with PISA like measures of quality.

Education can make more of a difference, if it is organized better (see for example Pritchett and Filmer, 1997, Schleicher, 2010, further pursued in section 4). This applies to each and every stage in the educational career of a person. The most interesting part of the evidence is that second chances exist: at every age and every stage there is room for learning, even though the optimal route is one where the best learning experiences start in womb. Yet, education seems to have become less important in people's pathways through life with an increasing impact of parental background and the home environment, as is illustrated in Figure 1, where the y- axis represent the impact of the school versus parental background on learning achievement, or the impact of cognitive achievement at say age 15 versus parental background on the first steps in the career (in terms of the type of employment and the wage level).

Figure 1.

Impact of the school versus parental background



This Figure is based on a large number of studies from the economically well-developed countries, most of using longitudinal data. Such data are available for example in the US in the Perry Preschool Study (Schweinhart, 2006). Suu-Ruu and Reynolds, 2004 give an overview of the conclusions from US studies on pre-school education on school success later in life (which is positive for children at risk). However, an (admittedly superficial) analysis of these background studies confirms the U-curve of Figure 1: for generations born before around 1980 the impact of parental background on performance later in life decrease, to gradually creep back afterwards.

The UK has such longitudinal data through the "Longitudinal Survey of Young People in England" project (LSYPE data, extensively used by Schoon et al, 2010). Schoon et al. (2010) concludes from a comparison of generations born in 1958, 1970 and 1989/1990 and followed up when they were 16 years old: "The findings thus suggest the increasing marginalization of young people from less educated parents". Indeed the coefficients of parental education on the child's academic achievement at age 16 decrease (slightly) from the generations of 1958 to 1970, to increase again from 1970 to 1989/1990. Similar conclusions can be drawn from Schoon and Polek (2011) (focusing on carrier attainment in relation to parental income), Schoon and Cheng (2010) on cognitive ability at age 11 and political trust at age 30, and Schoon (2010) on academic achievement and parental

education for the three UK generations of 1958, 1970 and 1989/1990. This is against a background of a very strong relation between educational attainment and the family background as also was established by Ermish and Francesconi (2000) for the UK with the British Household Panel Study (in other words: a quite different data set). But the UK is not the exception.

On employment and cognitive skills we have the study of Bertschy et al. (2008) using Swiss data to get an insight in the employment of young people in 2005 in relation to their cognitive abilities as measured in the PISA 2000 assessment. Students with lower PISA results were significantly more likely to be in an inadequate employment situation two years after finishing vocational schools (the type of school on which this study focuses). In Denmark Anderson (2005) interviewed the PISA 2000 participants four years later, concluding that PISA assessments were a perfect predictor of the educational or labour market position four years later. However, at the same time the home background continued to play an important role aside from the cognitive abilities as measured in PISA. McIntosh and Munk (2006) voice their surprise at similar findings in Denmark as the Danish welfare system in terms of free access to all levels of education is so well developed. For France Maurin (2002) draws attention to the fact that parental poverty has such a strong impact on educational achievement (parental income does not have a linearly continuous impact on achievement). Buis (2010) also shows the marginal decrease in the impact of parental background on educational achievement for the Netherlands for the generations born where 1980 appears to be a turning point after which this impact remains steady or increases again. In Canada Lambert et al. (2001) had established the overwhelming impact of parental educational achievement on both participation and persistence in postsecondary education, followed by Finnie and Mueller (2008) and Finnie et al (2004), in Norway Aakvik et al (2005) and in Australia Marjoribanks (2005) as is the case in Guldi et al. (2006).

Few of these studies however contain a direct indication of the time trend in the impact of parental education on the child's labour market position. Overall however, looking at the changes in the coefficients of the impact of the school versus the parental background

from studies done at different points in time over the past decades at least rejects the hypothesis that social mobility has continued to be on the rise, as it was for the generations born after 1945 until about 1980.

3. If you believe that education is too expensive, try ignorance

The position of individuals in society is closely linked to the labour market. There the hopes and aspirations of people for rewarded accomplishments are realized. The talents of people, developed and augmented throughout the education career, in terms of cognitive and attitudinal characteristics are important to function well on the labour market with a simple the more, the better.

The labour market continues to go through major changes, characterized by an increasing "win" of "technology" over "education" (Tinbergen, 1975). The demand for well-trained people has risen faster than the supply (which – by itself – has grown rapidly in the past decades). This metaphor could be also increasingly seen as applicable to the content of education, where the complexities of our society rise faster than can be accommodated in the delivery of education, as Elkana (2009) suggests for universities.

The result of the changing scarcities on the labour market is a disequalization in wages which has been occurring in most OECD countries (see OECD, 2008) – on a level which has been unprecedented in the recent history and is very much in contrast to the accepted wisdom of the "Kuznets curve": inequality in incomes increases in early stages of development to decrease afterwards.

It is well recognized that knowledge investments (i.e. more and better education) is the driver of economic growth. Hanushek and Woessmann (2010) show: "That cognitive skill can account for growth differences within the OECD, whereas a range of economic institutions and quantitative measures of tertiary education cannot. Under the growth model estimates and plausible projection parameters, school improvements falling within currently observed performance levels yield very large gains. The present value of OECD aggregate gains through 2090 could be as much as $275 trillion, or 13.8 percent of the

discounted value of future GDP. Extensive sensitivity analyses indicate that, while differences between model frameworks and alternative parameter choices make a difference, the economic impact of improved educational outcomes remains enormous. Interestingly, the quantitative difference between an endogenous and neoclassical model framework – with improved skills affecting the long-run growth rate versus just the steady-state income level – matters less than academic discussions suggest". Tazeen (2008) similarly finds that basic (learnable) cognitive skills have a significant and positive effect on earnings and economic growth. On attitudes that can be learned in school the evidence is less conclusive (Levin, 2011).

Acemoglu (2002) concluded already some 10 years ago from a extensive review of the literature that the technical change which we see in the work place favours more skilled workers (p.7). Moreover that this change has been accelerating in the past few decades (p.64). He furthermore suggests that it is the supply of skills (the quality and quantity of education) which has induced the development of skill complementary technologies. In other words, education has been the driver in education growth through its supply of skills, only to realize that this has made these skills even scarcer! In a way one finds the same conclusion in OECD (2007) with a call on higher education to adept according to the new complexities of our society (as also reflected in Elkana, 2008) or in the EU study of Hannan and Werquin (2001).

The integration of youngster on the European labour market has been the concern of Mueller (2005) drawing attention to the left hand side of the PISA performance distribution: those who perform at age 15 on or below the level 2 (out of 7 PISA levels) are at risk for the labour market. The call of Hanushek and Woesman (2010) to improve education in order to reap the economic gains has then a social side as well: large socio-economic disparities in educational performance (as for example measured in PISA) do not play out well for large segments of society. Social mobility has an economic benefit as well.

It is in this spirit that Schleicher (2011) divides the PISA-world (the countries who have participated in PISA) into four parts:

- High average performance, high socio-economic equality
- High average performance, large socio-economic disparities
- Low average performance, high socio-economic equality
- Low average performance, large socio-economic disparities.

The implied notion is that it is the choice of a country by means of the organization of its education to be in any of these compartments, where the top economic performer would be the country with both a high average performance as well as high socio-economic quality.

4. The organization of education matters

OECD (2010) explains that 81% of educational learning accomplishments as measured in PISA for 15 year olds are due to organizational characteristics which are closely related to education policy. Money matters, but at a time when many systems of education are underperforming money is not the most important issue. This can be generalized to cover educational policy in the full period up to say the age of 18.

This is very much in line with early childhood interventions (ECD) as is found by Engle et al (2011). They look at the organization of ECD from the perspective of the way in which ECD might reduce the socio-cultural, psychological and biological risks that influence child development, while contributing to the protective factors. Their analysis of at least 100 different programs provides conclusive directions for an organization of ECD which is effective. This is all the more relevant in view of the findings from Goodman and Gregg, that in the UK "educational deficits emerge early in children's lives, even before entry into school, and widen throughout childhood. Even by the age of three there is a considerable gap in cognitive test scores between children in the poorest fifth of the population compared with those from better-off backgrounds. This gap widens as children enter and move through the schooling system, especially during primary school years".

OECD (2010) gives a long list of conditions under which schools function better for their student's performance, as well as on the contribution of the school to social mobility, i.e. to the reduction of social disparities, while having a high average performance (moving into the first compartment of the four compartments mentioned above. The keyword is teachers who are well qualified, well endowed and well empowered. The lessons from the analysis of the relation between PISA results and the organization of schools (or educational policy) go in the same direction. This study also provides a lot of hope, by showing that in many countries change is not just observed in the quantitative output of education systems, but also that impressive improvements in the quality of learning outcomes have taken place. For example Korea's average performance was already high in 2000, but Korean policy makers were concerned about the relative narrowness of excellence in PISA. Within less than a decade, Korea was able to virtually double the share of students demonstrating excellence in reading literacy. Another example: A major overhaul of Poland's school system helped to dramatically reduce performance variability among schools, reducing the share of poorly performing students and raising overall performance by the equivalent of more than half a school year. Germany was jolted into action when PISA 2000 revealed below-average performance and large social disparities in results, and has been able to make progress on both fronts. Last but not least, countries such as Brazil, Chile, Indonesia and Peru have seen impressive gains catching up from very low levels of performance.

Why is social mobility in some of the high performing country in retreat? Several causes can be advanced. A minor impact could come from the change in the pool of talent. The pool of talent in the early part of the 20th century was apparent. Some would say that it has dried up by now, noting that the present group of parents with a low socio-economic status has had all the chances for a good education. But this argument ignores two major facts: first is that it has been a serious political battle, fought by scientists and politicians alike to get recognition for the existence of the pool of talent and secondly that major parts of the immigrant population parents have not had access to quality education in their youth.

A second explanation comes from the fragmentation of the education system, highlighted with the example of the admissions in 2011 to a bachelor university education in Cambridge. 80% of the admitted students come from 5 private (so called “public”) schools, which only cater for 0.01% of the UK secondary education enrolment. Within this fragmentation, children from well-to do parents receive a better education than those from poorer parents.

A third explanation is in the development of the teaching profession: the teacher is no longer the elite of the village or neighbourhood, understanding far more the complexities of society than other individuals. The teacher used to be a well-trained doctor, but has in many countries turned into a nurse: very important, very caring, highly motivated, but often insufficiently trained and retrained.

Essential elements of an education system which leads to high performance and high social mobility (performobility) are the bridges between the different stages of growing up of youngsters: the transitions from ECD towards primary, secondary and higher education. The role of the parental environment is overwhelming at early ages and used to decrease with age. Educational interventions geared toward performobility have to make sure that youngsters are not lost in the transitions.

5. The Transition to Post Secondary Education

The two sides of the transition to post secondary education are admissibility and choice, the willingness to apply. Not every high school graduate is qualified to apply, is admissible to higher education. Many countries have tracked systems of secondary education in which only the pre university track gives admission to universities. In other countries the Standard Achievement Test result determines the admissibility of the student to higher education.

Social mobility is unnecessarily constrained in this way. The impact of the home on the qualifications which determine admission is then simply translated and second chances are denied to young adults. In recognition of this many countries have moved towards a

double strategy, with possibilities to move towards the university through different routes and to reserve places in university for students who may not (yet) qualify academically, but do qualify on non cognitive traits (as for example measured in the Personal Potential Test included in the Graduate Record Exam). The community colleges in California as a second route have served society well. The President of the University of California proudly communicated in 2009 that one third of the graduates from the master and PhD program had come to the university through community colleges.

Tuition fees can be a barrier to higher education if there is no student loan or grant system or if they are "too high" ("outrageous"). Dearden et al (2010) present the UK evidence that tuition fees –in a moderate range, not exceeding some 20% of modal income- do not affect participation if a social loan and grants system exists. This is in line with the evidence (less well reported) of most EU countries which have introduced tuition fees in the past decades. It is also in line with the observation by Mc.Intosh and Munk (2006) that the Danish welfare system with high study grants and no tuition fees does not provide for more social mobility than other less well endowed systems.

However, in Chile students are on the streets against tuition fees. In Germany the political climate enforces an abandonment of tuition fees (without compensation from public funds). In the US there are serious concerns about the impact of tuition fees on university participation. These concerns may be well justified if the fees become too high ("outrageous"). We cannot extrapolate the findings of the past (based on point estimates for the impact of the changes in tuition fees which took place in that past) towards much higher levels of tuition fees. But we can safely say that within the range of tuition fees up to some 20% of modal income the impact of the level of the tuition fee on social mobility is negligible (Ritzen, 2010).

6. A Renaissance?

The debate on educational policy is often partisan around issues of change. However, the education community is increasingly supportive is pleading for change despite the inherent tendency to look back to the past. Schools are generally under managed in the

sense of giving teachers opportunity to contribute to the discussion on the mission of the school and the teacher's important role in fulfilling this mission.

Are there sufficient countervailing powers to go against policies based on comfort (resisting change) and interest to promote optimal talent? And would this still be the case if the changes needed for a renaissance of social mobility are quite radical? The radicalism is in the creation of a school environment which is ahead of the game compared to the home environment, even of the (sub) elite. In a way, it is the school as it used to be: the schoolmaster or mistress univocally the authority in terms of understanding the complexities of society.

There was at a time when the teacher was drawn from the cognitive elite which did not have the experience in the family to go to university. A time, when teaching was a serious alternative to being a leader in business or in other parts of society.

To bring this back requires a massive change in the teaching force, with massive investments in the preparation and the continuous education of the teacher, in wages and other measures to support a drive to attract and keep the best and the brightest into the teaching force. So that they can make the difference and fully exploit the pool of talent, so that they can recreate social mobility, not just as the binding force of western society, but also as an economic necessity in these times of demographic changes (ETS, 2007).

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